

## CLAIMS

1. A protective cover (100), made of electrically insulating material, intended to be mounted on the rear bearing (14) of a polyphased rotating electrical machine of a type comprising, in addition to the cover (100) covering the rear bearing (14), an outer frame (13,14) comprised of a rear bearing (14) and having a polyphased wound stator (8), in which the phase outputs are connected to a phase connector (102) intended to be connected to an exterior electronic module and a support (100), made of electrically insulating material, and fixed-mounted on the rear bearing (14) and holding the phase connector (102), characterized in that the cover (100) is configured to both support the phase connector (102) and cover the rear bearing (14).
2. The cover according to Claim 1, characterized in that the phase connector (102) of the stator is supported by a projection (113, 112) coming out of the cover (100).
3. The cover according to Claim 2, characterized in that the projection (113, 112) has means for mounting it on the rear bearing (14).
4. The cover according to Claim 3, characterized in that the projection (100) is arranged on the external periphery of the cover (100) [sic].
5. The cover according to Claim 4, characterized in that the phase connector (102) is offset by the projection (113, 112) to a location beyond the external periphery of the cover (100).
6. The cover according to Claim 3, characterized in that the projection (113, 112) has arms (113) coming out of the cover (100).
7. The cover according to Claim 6, characterized in that the cover (100) has an external peripheral skirt (115) and a bottom (117) and in that the support arms (113) are integrated with the bottom (117) and the skirt (115) of the cover (100).
8. The cover according to Claim 6, characterized in that the two arms (113) are connected by a flange (112) that carries the phase connector (102).

9. The cover according to Claim 8, characterized in that the phase connector (102) has a rod (208) crossing the flange (112) and in that the rod is integrated with a support tab (121) intended to be attached to the rear bearing (14).
10. The cover according to Claim 9, characterized in that the support tab (121) is supported on a chimney (209) integrated with the rear bearing and is perforated for the passage of a mounting element in the chimney (209).
11. The cover according to Claim 10, characterized in that the phase connector (102) consists of a protuberance (108), hollow on the inside, carried by the flange (112), in that the rod (208) crosses the flange (112) and the protuberance (108), in that the support tab (121) has a projection at the level of the zone where it connects to the rod (208), and in that the projection is mounted inside the protuberance (108).
12. The cover according to Claim 11, characterized in that the project is supported on a part perforated for passage of the rod (208), and in that the perforated part is made of thermoset plastic material resistant to creep attached by cast molding to the inside of the protuberance (108).
13. The cover according to Claim 1, characterized in that the rod (208) is threaded.
14. The cover according to Claim 8, characterized in that the phase connector (102) is connected to phase connection inputs (125), for mounting the phase outputs, by electrical conductors (127) at least partially sunk in the projection (113, 112).
15. The cover according to Claim 14, characterized in that the electrical conductors consist of electrical tracks (127) and in that at least two electrical tracks (127) are installed, each connector to an electrical contact face (109 to 111) comprising the phase connector (102).
16. The cover according to Claim 15, characterized in that the electrical tracks (127) are sunk in the cover (100) and in the arms (113), and in that the electrical tracks (127) are configured to be sunk in the support flange (112).

17. The cover according to Claim 2, characterized in that the phase connector (102) is connected to phase connection inputs (125), for mounting the phase outputs, by electrical conductors (127) at least partially sunk in the projection (113, 112), and in that the phase connection inputs (125) extend to the external periphery of the cover (100) and are covered by a secondary cover (157), made of electrically insulating material, mounted on the cover (100).
18. The cover according to Claim 17, characterized in that the secondary cover (157) is in the shape of a circle arc, in that the phase connection inputs consist of mounting tabs (125), and in that the secondary cover (127) has hollow bosses housing the mounting tabs (125).
19. The cover according to Claim 2, characterized in that a brush holder (135) is covered by the cover (100) and is associated with a connector (104), and in that the connector (104) of the brush holder (135) is made in one piece with the cover (100).
20. The cover according to Claim 19, characterized in that the cover (100) has a bottom (117) and in that the connector (104) of the brush holder (135) is connected to the brush holder (135) by electrically conducting tracks sunk in the bottom (117) of the cover (100).
21. The cover according to Claim 20, for an alternator-starter comprised of a sensor holder and a connector (106) of the sensor holder, characterized in that the sensor holder is mounted under the bottom (117) of the cover (100) and in that the sensor holder connector (104) passes radially through an opening (151) in the peripheral annular wall of the cover.
22. The cover according to Claim 19, characterized in that it is in two parts and in that one of the parties has the phase connector, while the second part covers the brush holder (135).
23. An alternator, characterized in that it has a cover according to Claim 2.
24. An alternator-starter, characterized in that it has a cover (100) according to Claim 21.